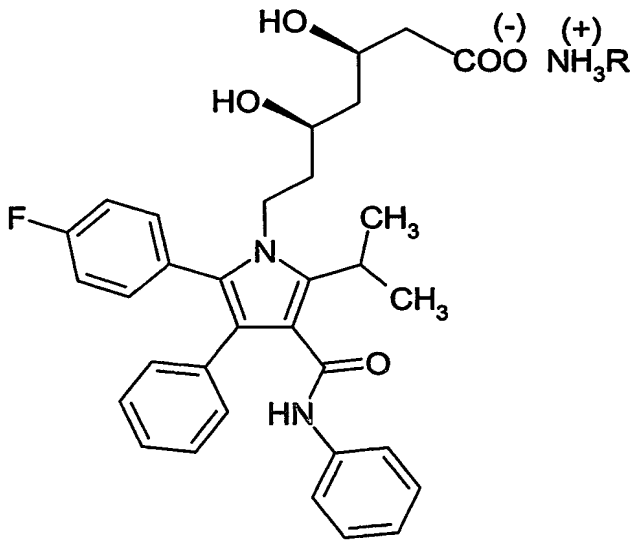
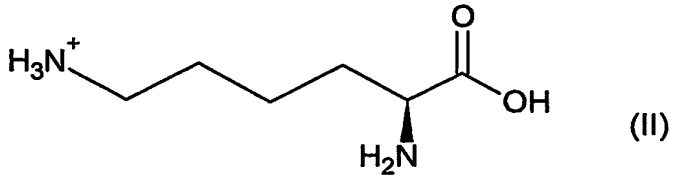
What we claim is:

1. A process for the synthesis of amorphous atorvastatin calcium characterized by dissolving the salt of the formula (I) of atorvastatin acid formed with a basic amino acid

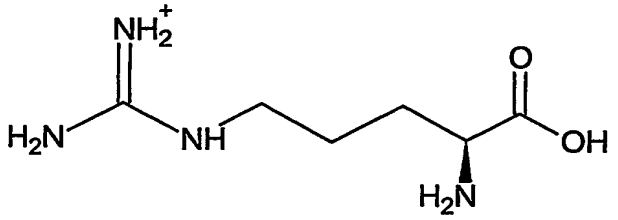


I

– wherein the meaning of R is the compound of formula (II) or (III)



(II)



(III)

– in a mixture of water and a water miscible organic solvent, adding an aqueous solution of a water soluble calcium salt to the solution and isolating the so obtained entirely amorphous atorvastatin calcium of high purity by filtration.

2. The process according to claim 1, characterized by using calcium acetate or calcium chloride as water soluble calcium salt.

3. The process according to claims 1 and 2, characterized by using methanol, ethanol, isopropanol or acetone as water miscible organic solvent.